



EMA

Environmental Management Associates, LLC

June 22, 2015

Reference No. 559

Mr. David Reuland
Georgia Environmental Protection Division
Hazardous Sites Response Program
Floyd Towers East, Suite #1054
2 Martin Luther King Jr. Drive, SE
Atlanta, Georgia 30334-9000

Dear Mr. Reuland:

Re: Semi-annual VRP Progress Report - June 2015
Voluntary Remediation Plan
Professional Cleaners & Linen Service
2040 Beaver Ruin Road, Norcross, GA

On behalf of Indian Trail Retail Assoc, LTD, Environmental Management Associates, LLC (EMA) has attached the Semi-annual VRP Progress Report for June 2015 for the above-referenced site. Based on the results of this sampling event, the groundwater at the Site meets the associated Type 4 RRS for tetrachloroethene.

Please find one hard copy and one electronic version of the progress report. We certify that to the best of our knowledge that the electronic copy is complete, identical in content to the paper copy, and virus free.

Should you have any questions related to this correspondence, please contact the undersigned at (770) 271-4628.

Yours truly,

Environmental Management Associates, LLC

Brent Cortelloni, CHMM

cc: Craig Harper - Indian Trail Retail Assoc., LTD

SEMI-ANNUAL VOLUNTARY REMEDIATION PLAN PROGRESS REPORT - JUNE 2015

PROFESSIONAL CLEANERS & LINEN SERVICE
2040 BEAVER RUIN ROAD
NORCROSS, GEORGIA

HSI No. NA

June 16, 2015

Brent Cortelloni, CHMM
Project Manager

John O. Schwaller, P.G.
(GA. Registration No. 1617)



EMA

Environmental Management Associates, LLC
5262 Belle Wood Court, Suite A
Buford, Georgia 30518

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1.0 PROJECT SUMMARY

The Professional Cleaners & Linen Service site (Site) is located at 2040 Beaver Ruin Road in Norcross, Gwinnett County, Georgia and is part of a 1.79-acre multi-tenant shopping center (Crossings Shopping Center) developed in 1984. The surrounding properties are predominantly commercial with some residential to the north. A dry cleaner has operated within one of the tenant spaces (Suite 15) since 1984 and is believed to be the source of the Site contamination. A topographic map (Property Location Map) of the surrounding area is included as Figure 1.

A Phase I and II Environmental Site Assessment (ESA) was completed in February 2011 for the subject property. During the Phase II ESA activities, a release of tetrachloroethene (PCE) was detected in the subsurface soils and groundwater above the applicable Notification Concentrations (NC) referenced in Georgia Environmental Protection Division's (EPD) Hazardous Site Response Act (HSRA) Regulations Chapter 391-3-19, Appendix I. Within 30 day's of detection, the detected soils above the NC were removed from the Site based on the confirmatory soil sample results. A release notification to groundwater was subsequently submitted to EPD on April 7, 2011. It should be noted that PCE is the only contaminant of concern at this Site.

A Voluntary Investigation and Remediation Plan (VIRP) prepared by EMA was submitted to EPD on September 2, 2011. EPD approved the VIRP and accepted the Site into the Voluntary remediation Program (VRP) with conditions and comments in two letters dated March 6, 2012.

EMA conducted two formal injections of an in-situ chemical oxidation (ISCO) reagent (PeroxyChem's (formerly FMC Corporation) Klozur® sodium persulfate mixed with an alkaline activator (sodium hydroxide) to form sulfate and hydroxyl radicals) to reduce the levels of the groundwater contamination in what was assumed to be the entire contaminant plume (The area from MW-1 south-southwest to MW-2). The injections were completed in April/June 2012 and August 2012. Several quarterly sampling events were completed prior to and following the final injection.

A VRP Compliance Status Report (V-CSR) dated May 15, 2013 was submitted to EPD in June 2013. At that time PCE was below the EPD Type 4 Risk reduction Standard (98 ppb) in all of the monitoring wells and the EMA proposed Alternative Concentration Limit (ACL) of 70 ppb in the V-CSR. EPD provided comments on the V-CSR in correspondence dated October 10, 2013.

Semi-annual Progress Report No. 3 was submitted in May 2014 and included the confirmatory groundwater sampling event requested by EPD, additional soil sampling to identify any source areas not detected during the previous investigations, and additional horizontal delineation of the on-Site groundwater contamination. The October 29 and 30, 2013 round of sampling and the sample results from additional monitoring well MW-11 on April 22, 2014 indicated that PCE levels have rebounded at upgradient location MW-1 and other previous areas of unknown contamination have been identified along the east side of the building. The higher level of PCE detected at well MW-4 was most likely the result of the upgradient injections around monitoring well MW-2 versus standard contaminant migration within the groundwater. The high level of PCE in the groundwater at MW-11 was not unexpected based on the groundwater flow direction; however, the previous 2011 Phase II investigation in this area did not identify this area as impacted.

Based on the rebound of the PCE contamination in wells MW-1 and MW-4 and the contamination detected in well MW-11, a third formal injection of activated persulfate was applied to the groundwater contaminant plume in October 2014 and another limited injection in January 2015. The injection locations included the east side of the property running from MW-1 thru MW-11 to MW-4.

This Semi-annual VRP Progress Report No. 5 was prepared in accordance with the VRP and covers the activities conducted since the Semi-annual Progress Report No. 4 submittal. These activities included a limited semiannual monitoring event as detailed in EMA's correspondence dated June 4, 2015.

2.0 ACTIONS TAKEN SINCE LAST SUBMITTAL

2.1 SEMI-ANNUAL GROUNDWATER MONITORING EVENT

The fifth semi-annual groundwater monitoring event was conducted in May and June 2015 using the low-flow purging and sampling technique. A groundwater sample was collected from well MW-11 on May 29, 2015, and from wells MW-1, MW-4, and MW-7 on June 8, 2015. Static groundwater level measurements were recorded at each monitoring well prior to purging. The groundwater measurements are included in Table 1. Since only four wells were sampled during this event, a potentiometric contour map was not developed based on the limited number of measurements. The potentiometric contour map for the November 2014 event has been included for reference as Figure 2.

Groundwater samples were collected using the low-flow/low-stress purging and sampling technique referenced in USEPA Region IV's SESD Operating Procedures - Groundwater Sampling dated March 4, 2013. Peristaltic pumps with disposable Teflon or Teflon lined tubing was used for the purging and sampling. The "Soda Straw" method was used to collect the groundwater samples for tetrachloroethene (PCE). The groundwater samples were delivered to Analytical Environmental Services, Inc. (AES) located in Atlanta, Georgia. AES is an accredited laboratory under the National Environmental Laboratory Accreditation Program (NELAC) (Accreditation ID: E87582). The groundwater samples were submitted for PCE by SW-846 Method 8260B. During the low-flow/low-stress purging procedure, field measurements of reduction oxidation potential (redox), dissolved oxygen (D.O.), turbidity, pH, conductivity, and temperature were recorded. Once the field measurements stabilized for three consecutive readings, samples were collected directly into the pre-preserved laboratory supplied containers. A trip blank sample was included with the sample sets to assess cross-contamination during shipping. Field "rinsate" samples were not required since disposable tubing was utilized for the sample collection. The low-flow well purging/sampling forms are included in Appendix A. The analytical reports are included in Appendix B.

The PCE results for the confirmatory groundwater monitoring event are summarized in Table 2 (highlighted in red) and illustrated on Figure 3. PCE concentrations were non-detect for well MW-7. The PCE concentration was reported at 15 µg/L for MW-1, 31 µg/L for well MW-4, and 51 µg/L for well MW-11. All detected PCE concentrations are below the Type 4 RRS of 98 µg/L.

The low-flow well purging/sampling forms are included in Appendix A. The analytical reports are included in Appendix B.

2.2 DISCUSSION AND CONCLUSIONS

Significant remedial efforts have been completed to bring the Site into compliance with the RRS. Three formal injections of the ISCO reagent have been conducted at the Site over the past two years. In addition, limited injections have been conducted in what we believe are the source areas at MW-1 and the former dry cleaning machine location (adjacent to MW-7). Based on the groundwater sampling conducted in November 2014/January 2015 for the 4th semi-annual, the groundwater PCE analytical results were reported as non-detect. The results from this monitoring event indicate we have a slight rebound at MW-11 and MW-4; however, the concentrations remain below the Type 4 RRS. Therefore, the groundwater at the Site meets the associated Type 4 RRS for commercial properties.

As detailed in our June 4, 2015 correspondence, it is Indian Trail Retail Assoc., LP's intent to enact a Uniform Environmental Covenant (UEC) for the Property within the next 60 days. As discussed during the Site walk, EPD will issue a letter approving the removal of the Site from the VRP, or something equivalent, after the UEC has been executed. It is also our understanding that EPD will approve a NFAR status for the Site if the contamination doesn't rebound after the December 2015 monitoring event.

3.0 UPDATED COST ESTIMATE

The initial cost estimate for the proposed groundwater monitoring, delineation, and remediation of the groundwater PCE contamination known at the time was provided to EPD in the VIRP and included a range from \$66,600 to \$78,600. The total cost to date which includes the additional investigation and remediation activities detailed in this Progress Report is approximately \$123,372. A summary of the initial estimate included in the VIRP and the proposed cost to complete is included in Appendix C. We have also included a tabulated summary of the expenses since the last reporting period and a summary of hours charged by our Professional Geologist.

4.0 SCHEDULE AND FUTURE SUBMITTALS

The next limited semi-annual groundwater monitoring event will be completed in December 2015.

5.0 PROFESSIONAL GEOLOGIST CERTIFICATION STATEMENT

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

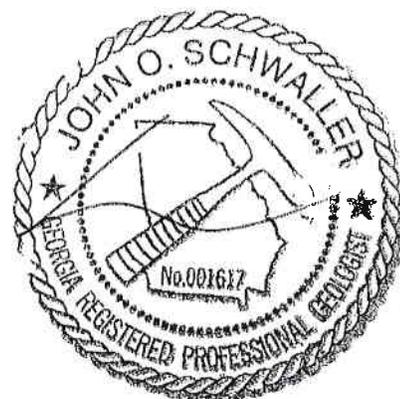
Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and log term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

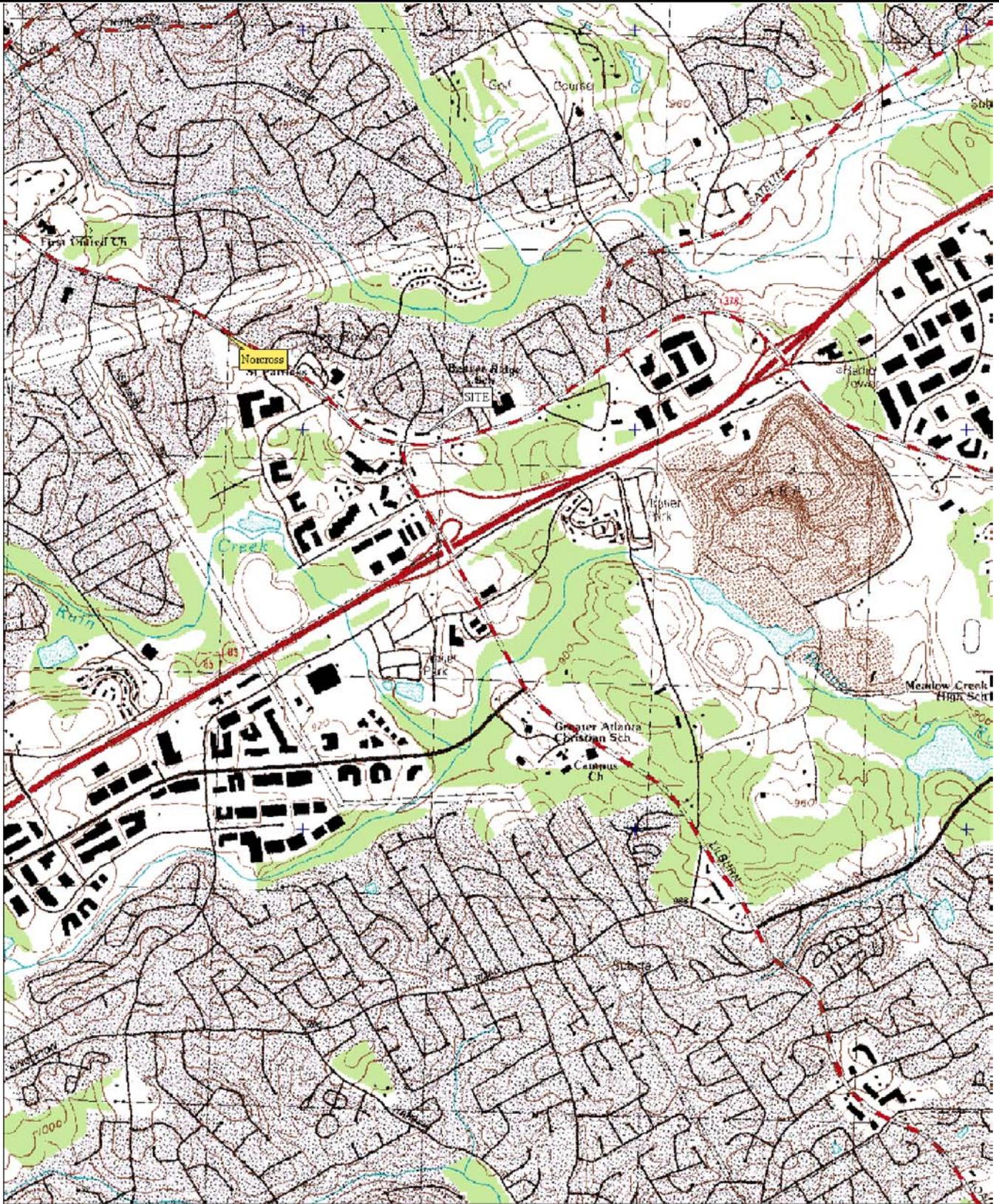
Mr. John O. Schwaller, P.G.
Georgia Registration No. 1617



Signature/Stamp



FIGURES

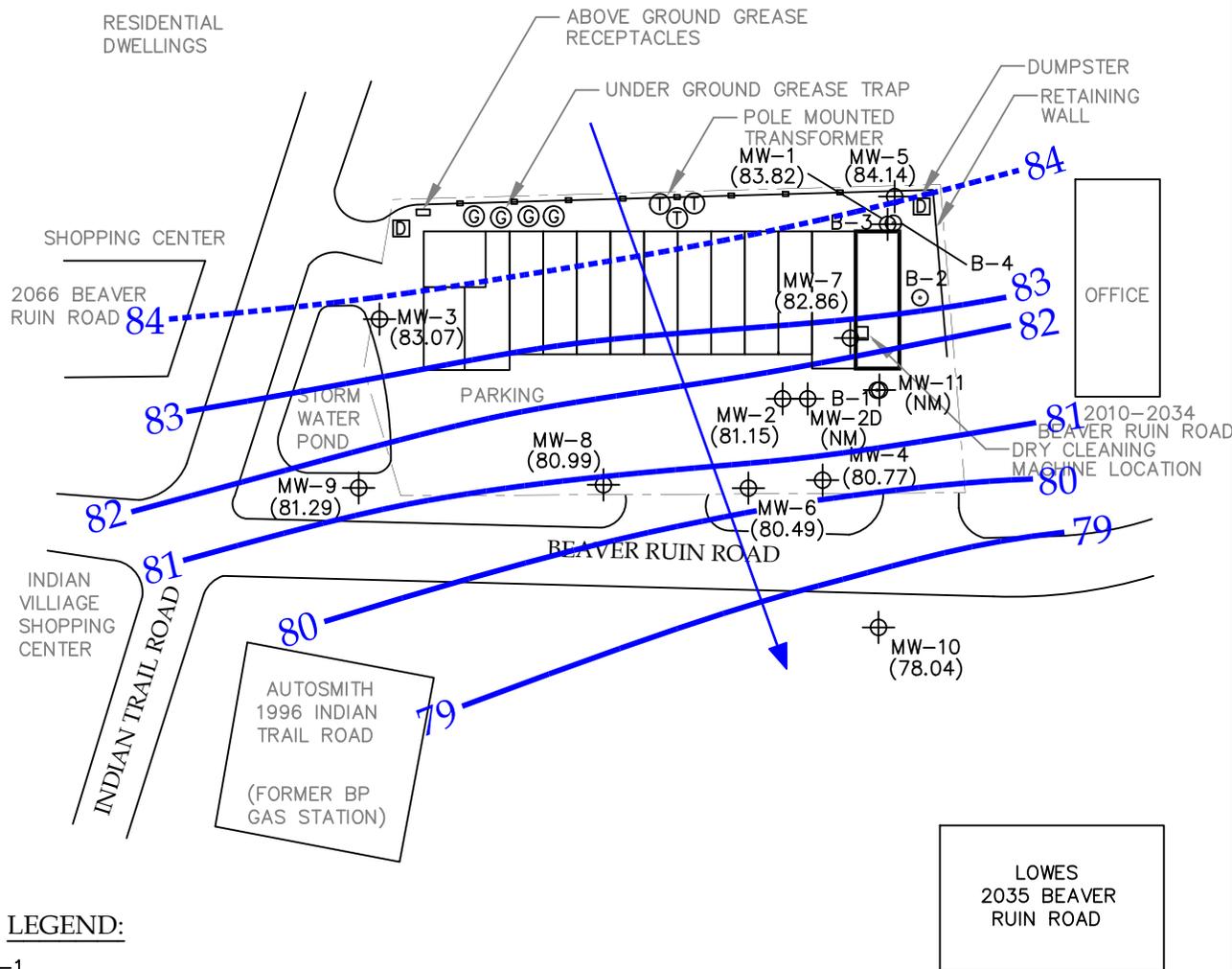


3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS

700 ft Scale: 1 : 24,000 Detail: 13-1 Datum: WGS84



Title	SITE LOCATION MAP	
Site	PROFESSIONAL CLEANERS & LINEN SERVICE 2040 Beaver Ruin Road, Norcross, Georgia	
	 EMA Environmental Management Associates, LLC	Facility ID. _____ Figure 1



LEGEND:

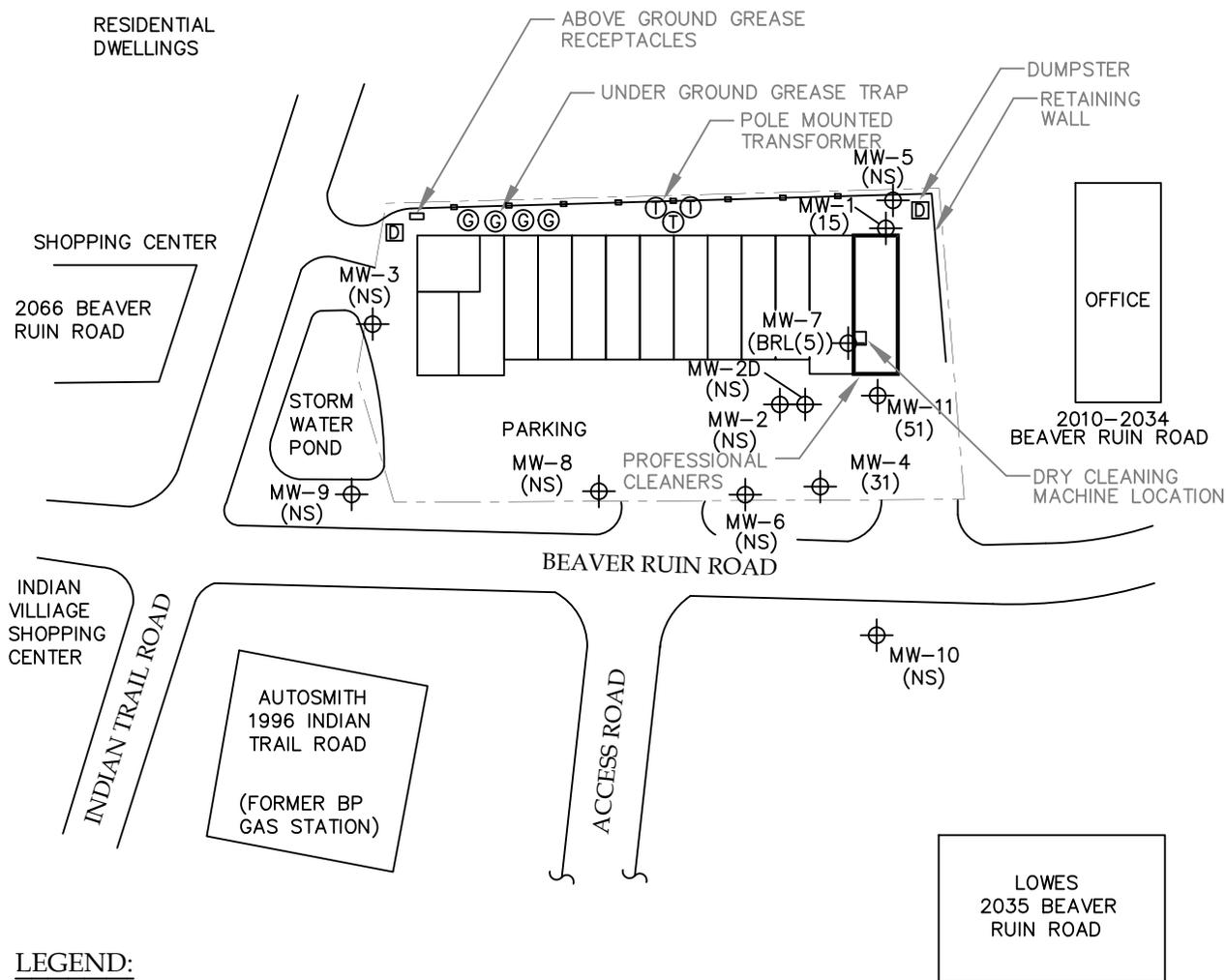
- B-1 BOREHOLE LOCATION
- MW-1 MONITORING WELL LOCATION
- (79.19) GROUNDWATER CONCENTRATION, FT AMSL
- (NM) NOT MEASURED
- 80** GROUNDWATER CONCENTRATION CONTOUR, FT AMSL
- GROUNDWATER FLOW DIRECTION

NOTE:

BASE MAP CREATED FROM GLE ASSOCIATES, INC
DRAWING 11000-11045 SHEET A-3.



Title	GROUNDWATER CONTOURS AND FLOW DIRECTION - NOVEMBER 2014	
Site	PROFESSIONAL CLEANERS & LINEN SERVICE 2040 Beaver Ruin Road, Norcross, Georgia	
	EMA	Facility ID.
	Environmental Management Associates, LLC	
	Figure	2



LEGEND:

- MW-1 MONITORING WELL LOCATION
- (BRL(5)) BELOW REPORTING LIMITS
- NS NOT SAMPLED

NOTES:

- 1.) CONCENTRATIONS ARE IN MICROGRAMS PER LITER.
- 2.) BASE MAP CREATED FROM GLE ASSOCIATES, INC. DRAWING 11000-11045 SHEET A-3.



Title	PCE ANALYTICAL RESULTS MAY/JUNE 2015	
Site	PROFESSIONAL CLEANERS & LINEN SERVICE 2040 Beaver Ruin Road, Norcross, Georgia	
	EMA	Facility ID.
	Environmental Management Associates, LLC	Figure 3

TABLES

TABLE 1

**GROUNDWATER LEVEL MEASUREMENTS
PROFESSIONAL CLEANERS AND LINEN SERVICE
NORCROSS, GEORGIA**

<i>Well Number</i>	<i>Date Measured</i>	<i>Ground Surface Elevation ⁽¹⁾</i>	<i>TOC Elevation ⁽¹⁾</i>	<i>Depth to Groundwater (feet BTOC) ⁽²⁾</i>	<i>Groundwater Elevation ⁽¹⁾</i>
MW-1	7/1/2011	99.59	99.18	15.10	84.08
	7/12/2011	99.59	99.18	15.25	83.93
	8/17/2011	100.41	100.00	15.76	84.24
	3/19/2012	100.41	100.00	17.78	82.22
	4/23/2012	100.41	100.00	18.00	82.00
	7/24/2012	100.41	100.10	18.65	81.45
	10/24/2012	100.41	100.10	19.02	81.08
	12/13/2012	100.41	100.10	19.43	80.67
	2/8/2013	100.41	100.10	18.81	81.29
	5/13/2013	100.41	100.10	17.78	82.32
	10/29/2013	100.41	100.10	15.51	84.59
	11/28/2014	100.41	100.10	16.28	83.82
	6/8/2015	100.41	100.10	15.18	84.92
MW-2	7/1/2011	98.53	97.96	16.50	81.46
	7/12/2011	98.53	97.96	16.63	81.33
	8/17/2011	99.37	98.80	17.30	81.50
	3/19/2012	99.37	98.80	18.43	80.37
	4/23/2012	99.37	98.80	18.59	80.21
	7/24/2012	99.37	98.92	18.70	80.22
	10/24/2012	99.37	98.92	19.50	79.42
	12/13/2012	99.37	98.92	19.83	79.09
	2/8/2013	99.37	98.92	NM	NM
	5/13/2013	99.37	98.92	17.50	81.42
	10/29/2013	99.37	98.92	16.67	82.25
11/28/2014	99.37	98.92	17.77	81.15	
MW-2D	5/3/2013	99.58	99.33	18.05	81.28
	10/29/2013	99.58	99.33	17.21	82.12
MW-3	7/1/2011	98.43	98.00	14.39	83.61
	7/12/2011	98.43	98.00	14.75	83.25
	8/17/2011	99.26	98.83	15.47	83.36
	3/19/2012	99.26	98.83	17.09	81.74
	4/23/2012	99.26	98.83	17.04	81.79
	7/24/2012	99.26	98.83	17.06	81.77
	10/24/2012	99.26	98.83	NM	NM
	12/13/2012	99.26	98.83	18.70	80.13
	2/8/2013	99.26	98.83	17.82	81.01
	5/13/2013	99.26	98.83	15.34	83.49
11/28/2014	99.26	98.83	15.76	83.07	
MW-4	8/17/2011	97.81	97.39	16.70	80.69
	3/19/2012	97.81	97.39	17.71	79.68
	4/23/2012	97.81	97.39	17.87	79.52
	7/24/2012	97.81	97.39	17.94	79.45
	10/24/2012	97.81	97.39	18.55	78.84
	12/13/2012	97.81	97.39	19.00	78.39

TABLE 1

**GROUNDWATER LEVEL MEASUREMENTS
PROFESSIONAL CLEANERS AND LINEN SERVICE
NORCROSS, GEORGIA**

<i>Well Number</i>	<i>Date Measured</i>	<i>Ground Surface Elevation ⁽¹⁾</i>	<i>TOC Elevation ⁽¹⁾</i>	<i>Depth to Groundwater (feet BTOC) ⁽²⁾</i>	<i>Groundwater Elevation ⁽¹⁾</i>
MW-4 cont.	2/8/2013	97.81	97.39	18.43	78.96
	5/13/2013	97.81	97.39	16.74	80.65
	10/29/2013	97.81	97.39	16.20	81.19
	11/28/2014	97.81	97.39	16.62	80.77
	6/8/2015	97.81	97.39	15.88	81.51
MW-5	3/19/2012	100.74	100.34	17.85	82.49
	4/23/2012	100.74	100.34	18.12	82.22
	7/24/2012	100.74	100.34	18.61	81.73
	10/24/2012	100.74	100.34	18.99	81.35
	12/13/2012	100.74	100.34	19.38	80.96
	2/8/2013	100.74	100.34	18.84	81.50
	5/13/2013	100.74	100.34	16.83	83.51
	10/29/2013	100.74	100.34	15.47	84.87
	11/28/2014	100.74	100.34	16.20	84.14
	MW-6	3/19/2012	97.21	96.81	17.18
4/23/2012		97.21	96.81	17.62	79.19
7/24/2012		97.21	96.81	17.34	79.47
10/24/2012		97.21	96.81	17.95	78.86
12/13/2012		97.21	96.81	18.40	78.41
2/8/2013		97.21	96.81	17.85	78.96
5/13/2013		97.21	96.81	16.20	80.61
10/29/2013		97.21	96.81	15.62	81.19
11/28/2014		97.21	96.81	16.32	80.49
MW-7	3/19/2012	100.89	100.69	19.39	81.30
	4/23/2012	100.89	100.69	19.54	81.15
	7/24/2012	100.89	100.78	19.27	81.51
	10/24/2012	100.89	100.78	20.51	80.27
	12/13/2012	100.89	100.78	20.86	79.92
	2/8/2013	100.89	100.78	20.46	80.32
	5/13/2013	100.89	100.78	18.40	82.38
	10/29/2013	100.89	100.78	17.29	83.49
	11/28/2014	100.89	100.78	17.92	82.86
MW-8	6/8/2015	100.89	100.78	17.16	83.62
	12/13/2012	98.78	98.65	19.97	78.68
	2/8/2013	98.78	98.65	19.44	79.21
	5/13/2013	98.78	98.65	17.52	81.13
	10/29/2013	98.78	98.65	17.07	81.58
MW-9	11/28/2014	98.78	98.65	17.66	80.99
	12/13/2012	98.78	98.63	19.89	78.74
	2/8/2013	98.78	98.63	19.15	79.48
	5/13/2013	98.78	98.63	17.11	81.52
	10/29/2013	98.78	98.63	16.54	82.09
11/28/2014	98.78	98.63	17.34	81.29	

**GROUNDWATER LEVEL MEASUREMENTS
PROFESSIONAL CLEANERS AND LINEN SERVICE
NORCROSS, GEORGIA**

<i>Well Number</i>	<i>Date Measured</i>	<i>Ground Surface Elevation⁽¹⁾</i>	<i>TOC Elevation⁽¹⁾</i>	<i>Depth to Groundwater (feet BTOC)⁽²⁾</i>	<i>Groundwater Elevation⁽¹⁾</i>
MW-10	2/12/2013	100.89	100.77	24.29	76.48
	5/13/2013	100.89	100.77	22.51	78.26
	10/29/2013	100.89	100.77	22.00	78.77
	11/28/2014	100.89	100.77	22.73	78.04
MW-11	4/22/2014	NM	NM	22.00	-
	11/28/2014	NM	NM	16.18	-
	5/29/2015	NM	NM	16.78	-

Notes:

(1) Top of casing (TOC), ground surface, and groundwater elevations based on an assumed datum. Re-surveyed on August 17, 2011. Modifications made to TOC elevations for MW-1, 2, and 7 on May 24, 2012.

(2) BTOC - below top of casing

TABLE 2

**GROUNDWATER PCE ANALYTICAL DATA
PROFESSIONAL CLEANERS AND LINEN SERVICE
NORCROSS, GEORGIA**

<i>Sample Location</i>	<i>Sampling Period</i>	<i>Sample Date</i>	<i>Analyte</i>	<i>Concentration (µg/L) ⁽¹⁾</i>	<i>Standard ⁽²⁾ (µg/L)</i>
MW-1	Initial Inv.	7/1/2011	PCE	50	5/19/98
	Baseline	4/23/2012	PCE	91/100 ⁽³⁾	
	1st Quarter	7/24/2012	PCE	46	
	2nd Quarter	10/14/2012	PCE	BRL (5)	
	3rd Quarter	2/8/2013	PCE	5	
		10/29/2013	PCE	100	
		11/11/2014	PCE	19	
		1/19/2015	PCE	BRL (5)	
	6/8/2015	PCE	15		
MW-2	Initial Inv.	7/1/2011	PCE	62	5/19/98
	Baseline	3/19/2012	PCE	47	
	1st Quarter	7/24/2012	PCE	41	
	2nd Quarter	10/14/2012	PCE	29/29 ⁽³⁾	
	3rd Quarter	2/8/2013	PCE	36/35 ⁽³⁾	
		10/29/2013	PCE	24	
		8/25/2014	PCE	61	
	11/28/2014	PCE	BRL (5)		
MW-2D	Delineation	4/4/2013	PCE	BRL (5)	
		10/29/2013	PCE	BRL (5)	
MW-3	Initial Inv.	7/1/2011	PCE	BRL (5) ⁽⁴⁾	5/19/98
	Baseline	4/23/2012	PCE	BRL (5)	
	1st Quarter	7/24/2012	PCE	BRL (5)/BRL ⁽³⁾	
	2nd Quarter	10/14/2012	PCE	Not Sampled ⁽⁵⁾	
	3rd Quarter	2/8/2013	PCE	BRL (5)	
	3rd Quarter	11/28/2014	PCE	BRL (5)	
MW-4	Initial Inv.	7/22/2011	PCE	BRL (5)	5/19/98
	Baseline	4/23/2012	PCE	BRL (5)	
	1st Quarter	7/24/2012	PCE	8.9	
	Confirmation	8/23/2012	PCE	8.3	
	2nd Quarter	10/14/2012	PCE	11	
	3rd Quarter	2/8/2013	PCE	11	
		10/29/2013	PCE	140/120 ⁽⁶⁾	
		8/14/2014	PCE	200	
		11/14/2014	PCE	BRL (5)	
	6/8/2015	PCE	31		
MW-5	Baseline	3/19/2012	PCE	BRL (5)	5/19/98
	1st Quarter	7/24/2012	PCE	BRL (5)	
	2nd Quarter	10/14/2012	PCE	BRL (5)	
	3rd Quarter	2/8/2013	PCE	11	
	Confirmation	2/18/2013	PCE	5.2	
		10/29/2013	PCE	11	
	11/28/2014	PCE	BRL (5)		

TABLE 2

**GROUNDWATER PCE ANALYTICAL DATA
PROFESSIONAL CLEANERS AND LINEN SERVICE
NORCROSS, GEORGIA**

<i>Sample Location</i>	<i>Sampling Period</i>	<i>Sample Date</i>	<i>Analyte</i>	<i>Concentration (µg/L) ⁽¹⁾</i>	<i>Standard ⁽²⁾ (µg/L)</i>	
MW-6	Baseline	3/19/2012	PCE	BRL (5)	5/19/98	
	1st Quarter	7/24/2012	PCE	5.2		
	Confirmation	8/23/2012	PCE	BRL (5)		
	2nd Quarter	10/14/2012	PCE	BRL(5)		
	3rd Quarter	2/8/2013	PCE	11		
	Confirmation	2/18/2013	PCE	BRL (5)		
			10/30/2013	PCE	33/25 ⁽⁶⁾	
			8/25/2014	PCE	BRL (5)	
		11/28/2014	PCE	BRL (5)		
MW-7	Baseline	3/19/2012	PCE	82	5/19/98	
	1st Quarter	7/24/2012	PCE	31		
	2nd Quarter	10/14/2012	PCE	19		
	3rd Quarter	2/8/2013	PCE	BRL (5)		
			10/29/2013	PCE	37	
			8/25/2014	PCE	62	
			11/28/2014	PCE	58	
			1/19/2015	PCE	BRL (5)	
		6/8/2015	PCE	BRL (5)		
MW-8	Delineation	12/11/2012	PCE	7.9	5/19/98	
	Confirmation	12/13/2012	PCE	BRL(5)		
	3rd Quarter	2/8/2013	PCE	BRL (5)		
			10/30/2013	PCE	BRL (5)	
			11/28/2014	PCE	BRL (5)	
MW-9	Delineation	12/11/2012	PCE	BRL (5)	5/19/98	
	3rd Quarter	2/8/2013	PCE	BRL(5)		
			10/30/2013	PCE	BRL (5)	
			11/28/2014	PCE	BRL (5)	
MW-10	Delineation	2/12/2013	PCE	6.6	5/19/98	
			10/30/2013	PCE	10	
			8/25/2014	PCE	BRL (5)	
			11/28/2014	PCE	BRL (5)	
MW-11	Delineation	4/22/2014	PCE	170	5/19/98	
			11/28/2014	PCE	BRL (5)	
			5/29/2015	PCE	51	

Notes:

- 1) µg/L - micrograms per liter
- 2) Type 1 Risk Reduction Standard (RRS)/Type 2 RRS/Type 4 RRS for groundwater.
- 3) Sample result and field duplicate result
- 4) BRL - Below reporting limit listed in paranthese
- 5) Insufficient groundwater available for sampling.
- 6) Sample result and confirmation sample result.

APPENDIX A
GROUNDWATER SAMPLING FORMS

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Pro Cleaners
 Ref. No.: 559

Date: 6/8/2015
 Personnel: B.C.

Monitoring Well Data:

Well No.: AW-1
 Measurement Point: 70c
 Constructed Well Depth (ft): 23'
 Measured Well Depth (ft): 23'
 Depth of Sediment (ft):

Screen Length (ft): 10
 Depth to Pump Intake (ft)⁽¹⁾: 51.5 ft
 Well Diameter, D (in): 2
 Well Screen Volume, V_s (mL)⁽²⁾: 1.6 gal / 6056 mL
 Initial Depth to Water (ft): 15.1 ft

Time	Pumping Rate (mL/min)	Drawdown		pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screens Purged ⁽³⁾
		Depth to Water (ft)	from Initial Water Level ⁽³⁾ (ft)								
16:05	150	15.17		906	22.1	3210	187	8.70	19	350	
16:12	"	15.19		895	22.5	3185	182	8.65	9.6	1050	
16:18	"	15.22		893	22.5	3180	181	8.55	9.3	900	
16:29	"	15.23		893	22.5	3175	180	8.53	9.3	1450	
16:34	"	15.25		898	22.5	3170	181	8.52	9.0	950	
16:38	"	15.27		891	22.4	3169	180	8.57	9.0	200	
										5300	1

- Notes:
- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
 - (2) The well screen volume will be based on a 5-foot screen length, $V_s = \pi \times (D/2)^2 \times (5 \times 12) \times (2.54)^3$
 - (3) The drawdown from the initial water level should not exceed 0.3 ft.
 - (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p/V_s.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Pro Cleaners
 Ref No.: 559

Date: 6/8/2015
 Personnel: B.C.

Monitoring Well Data:

Well No.: MW-4
 Measurement Point: 78C
 Constructed Well Depth (ft): 29.0
 Measured Well Depth (ft): 29.0
 Depth of Sediment (ft): 0

Screen Length (ft): 10'
 Depth to Pump Intake (ft)⁽¹⁾: 5' F.B.
 Well Diameter, D (in): 2
 Well Screen Volume, V_s (mL)⁽²⁾: 16 gallons / 6056 mL
 Initial Depth to Water (ft): 15.88

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
10:53	150	15.87		3.69	23.3	1044	336	8.15	11	150	
11:06	"	15.89		3.42	22.5	1017	378	7.88	9.3	1450	
11:12	"	15.91		3.39	22.4	1003	380	7.85	6.6	1950	
11:19	"	15.91		3.38	22.4	1000	381	7.81	6.2	1050	
11:35	"	15.92		3.38	22.4	1000	380	7.79	6.0	2700	
										6150	1.1

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length. $V_s = P \cdot (D/2)^2 \cdot (5 \cdot 12) \cdot (2.54)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p / V_s .

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Pro Cleaners
 Ref. No.: CS9

Date: 6/8/2015
 Personnel: B.C.

Monitoring Well Data:

Well No.: Mw. 7
 Measurement Point: PC
 Constructed Well Depth (ft): 30'
 Measured Well Depth (ft): 30'
 Depth of Sediment (ft): _____

Screen Length (ft): 151
 Depth to Pump Intake (ft)⁽¹⁾: 51 F.S.
 Well Diameter, D (in): 1
 Well Screen Volume, V_s (mL)⁽²⁾: 0.9 gallons / 1514 mL
 Initial Depth to Water (ft): 12.76

Drawdown

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level ⁽³⁾ (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V _p (mL)	No. of Well Screen Volumes Purged ⁽⁴⁾
10:01	100	17.13		7.91	25.6	5070	236	10.25	23	100	
10:10	11	17.17		7.40	24.8	4905	233	10.20	14	900	
10:20	11	17.23		7.23	24.7	4901	232	10.23	9.0	1800	
10:32	11	17.24		7.22	24.7	4935	232	10.20	8.3	1200	
10:41	11	17.29		7.21	24.7	4876	230	10.18	8.2	1100	
										4300	2.8

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 5-foot screen length, $V_s = p \cdot (D/2)^2 \cdot (5 \cdot 12)^3$
- (3) The drawdown from the initial water level should not exceed 0.3 ft.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing). No. of Well Screen Volumes Purged = V_p / V_s .

APPENDIX B
ANALYTICAL LABORATORY REPORTS



June 15, 2015

Brent Cortelloni
Environmental Management Associates, LLC
5262 Belle Wood Court
Buford Georgia 30518

TEL: (770) 271-4628
FAX: (770) 271-8944

RE: Professional Cleaners

Dear Brent Cortelloni:

Order No: 1506966

Analytical Environmental Services, Inc. received 3 samples on 6/9/2015 10:30:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/14-06/30/15.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Mirzeta Kararic
Project Manager

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Environmental Management Associates, LLC	Client Sample ID: MW-1
Project Name: Professional Cleaners	Collection Date: 6/8/2015 10:38:00 AM
Lab ID: 1506966-001	Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B					(SW5030B)			
Tetrachloroethene	15	5.0		ug/L	208620	1	06/11/2015 19:38	CH
Surr: 4-Bromofluorobenzene	96.6	70.6-123		%REC	208620	1	06/11/2015 19:38	CH
Surr: Dibromofluoromethane	91.3	78.7-124		%REC	208620	1	06/11/2015 19:38	CH
Surr: Toluene-d8	99.1	81.3-120		%REC	208620	1	06/11/2015 19:38	CH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Environmental Management Associates, LLC	Client Sample ID: MW-4
Project Name: Professional Cleaners	Collection Date: 6/8/2015 11:35:00 AM
Lab ID: 1506966-002	Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B					(SW5030B)			
Tetrachloroethene	31	5.0		ug/L	208620	1	06/11/2015 20:25	CH
Surr: 4-Bromofluorobenzene	94.2	70.6-123		%REC	208620	1	06/11/2015 20:25	CH
Surr: Dibromofluoromethane	96	78.7-124		%REC	208620	1	06/11/2015 20:25	CH
Surr: Toluene-d8	106	81.3-120		%REC	208620	1	06/11/2015 20:25	CH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Environmental Management Associates, LLC	Client Sample ID: MW-7
Project Name: Professional Cleaners	Collection Date: 6/8/2015 10:41:00 AM
Lab ID: 1506966-003	Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B					(SW5030B)			
Tetrachloroethene	BRL	5.0		ug/L	208620	1	06/11/2015 20:01	CH
Surr: 4-Bromofluorobenzene	94.9	70.6-123		%REC	208620	1	06/11/2015 20:01	CH
Surr: Dibromofluoromethane	98.1	78.7-124		%REC	208620	1	06/11/2015 20:01	CH
Surr: Toluene-d8	102	81.3-120		%REC	208620	1	06/11/2015 20:01	CH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EMA/BC

Work Order Number 1506966

Checklist completed by _____
Signature Date 6/9/15

Carrier name: FedEx ___ UPS ___ Courier ___ Client US Mail ___ Other _____

Shipping container/cooler in good condition? Yes No ___ Not Present ___
Custody seals intact on shipping container/cooler? Yes ___ No ___ Not Present
Custody seals intact on sample bottles? Yes ___ No ___ Not Present
Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes No ___

Cooler #1 3.4°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes No ___
Chain of custody signed when relinquished and received? Yes No ___
Chain of custody agrees with sample labels? Yes No ___
Samples in proper container/bottle? Yes No ___
Sample containers intact? Yes No ___
Sufficient sample volume for indicated test? Yes No ___
All samples received within holding time? Yes No ___
Was TAT marked on the COC? Yes No ___
Proceed with Standard TAT as per project history? Yes ___ No ___ Not Applicable
Water - VOA vials have zero headspace? No VOA vials submitted ___ Yes No ___
Water - pH acceptable upon receipt? Yes No ___ Not Applicable ___

Adjusted? _____ Checked by _____
Sample Condition: Good Other(Explain) _____
(For diffusive samples or AIHA lead) Is a known blank included? Yes ___ No

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1506966

ANALYTICAL QC SUMMARY REPORT

BatchID: 208620

Sample ID: MB-208620	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526							
Sample Type: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257369							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1506966

ANALYTICAL QC SUMMARY REPORT

BatchID: 208620

Sample ID: MB-208620	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526							
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257369							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	47.06	0	50.00		94.1	70.6	123				
Surr: Dibromofluoromethane	46.37	0	50.00		92.7	78.7	124				
Surr: Toluene-d8	50.17	0	50.00		100	81.3	120				

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1506966

ANALYTICAL QC SUMMARY REPORT

BatchID: 208620

Sample ID: LCS-208620	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526							
SampleType: LCS	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257368							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	52.72	5.0	50.00		105	64.2	137				
Benzene	49.21	5.0	50.00		98.4	72.8	128				
Chlorobenzene	46.12	5.0	50.00		92.2	72.3	126				
Toluene	48.86	5.0	50.00		97.7	74.9	127				
Trichloroethene	49.41	5.0	50.00		98.8	70.5	134				
Surr: 4-Bromofluorobenzene	47.35	0	50.00		94.7	70.6	123				
Surr: Dibromofluoromethane	47.22	0	50.00		94.4	78.7	124				
Surr: Toluene-d8	49.20	0	50.00		98.4	81.3	120				

Sample ID: 1506702-001AMS	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526							
SampleType: MS	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257371							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	55.19	5.0	50.00		110	60.5	156				
Benzene	49.69	5.0	50.00		99.4	70	135				
Chlorobenzene	45.84	5.0	50.00		91.7	70.5	132				
Toluene	49.41	5.0	50.00		98.8	70.5	137				
Trichloroethene	47.96	5.0	50.00		95.9	71.8	139				
Surr: 4-Bromofluorobenzene	50.62	0	50.00		101	70.6	123				
Surr: Dibromofluoromethane	45.81	0	50.00		91.6	78.7	124				
Surr: Toluene-d8	50.23	0	50.00		100	81.3	120				

Sample ID: 1506702-001AMSD	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526							
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257372							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	51.09	5.0	50.00		102	60.5	156	55.19	7.72	20	
Benzene	50.27	5.0	50.00		101	70	135	49.69	1.16	20	

Qualifiers: > Greater than Result value < Less than Result value B Analyte detected in the associated method blank
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1506966

ANALYTICAL QC SUMMARY REPORT

BatchID: 208620

Sample ID: 1506702-001AMSD	Client ID:	Units: ug/L	Prep Date: 06/09/2015	Run No: 293526
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208620	Analysis Date: 06/09/2015	Seq No: 6257372

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	46.20	5.0	50.00		92.4	70.5	132	45.84	0.782	20	
Toluene	47.14	5.0	50.00		94.3	70.5	137	49.41	4.70	20	
Trichloroethene	47.87	5.0	50.00		95.7	71.8	139	47.96	0.188	20	
Surr: 4-Bromofluorobenzene	48.62	0	50.00		97.2	70.6	123	50.62	0	0	
Surr: Dibromofluoromethane	48.86	0	50.00		97.7	78.7	124	45.81	0	0	
Surr: Toluene-d8	49.52	0	50.00		99.0	81.3	120	50.23	0	0	

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



June 03, 2015

Brent Cortelloni
Environmental Management Associates, LLC
5262 Belle Wood Court
Buford Georgia 30518

TEL: (770) 271-4628
FAX: (770) 271-8944

RE: Professional Cleaners

Dear Brent Cortelloni:

Order No: 1505P05

Analytical Environmental Services, Inc. received 1 samples on 5/29/2015 10:00:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/14-06/30/15.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Mirzeta Kararic
Project Manager

Analytical Environmental Services, Inc

Date: 3-Jun-15

Client: Environmental Management Associates, LLC	Client Sample ID: MW-11
Project Name: Professional Cleaners	Collection Date: 5/29/2015 9:20:00 AM
Lab ID: 1505P05-001	Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B					(SW5030B)			
Tetrachloroethene	51	5.0		ug/L	208079	1	05/29/2015 14:40	CH
Surr: 4-Bromofluorobenzene	72.2	70.6-123		%REC	208079	1	05/29/2015 14:40	CH
Surr: Dibromofluoromethane	109	78.7-124		%REC	208079	1	05/29/2015 14:40	CH
Surr: Toluene-d8	91.7	81.3-120		%REC	208079	1	05/29/2015 14:40	CH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EMA/BC

Work Order Number 1505 P05

Checklist completed by Miriam Power Signature Date 05/29/2015

Carrier name: FedEx UPS Courier Client US Mail Other

Shipping container/cooler in good condition? Yes No Not Present
Custody seals intact on shipping container/cooler? Yes No Not Present
Custody seals intact on sample bottles? Yes No Not Present
Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes No
Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes No
Chain of custody signed when relinquished and received? Yes No
Chain of custody agrees with sample labels? Yes No
Samples in proper container/bottle? Yes No
Sample containers intact? Yes No
Sufficient sample volume for indicated test? Yes No
All samples received within holding time? Yes No
Was TAT marked on the COC? Yes No
Proceed with Standard TAT as per project history? Yes No Not Applicable
Water - VOA vials have zero headspace? No VOA vials submitted Yes No
Water - pH acceptable upon receipt? Yes No Not Applicable

Adjusted? _____ Checked by _____
Sample Condition: Good Other(Explain) _____
(For diffusive samples or AIHA lead) Is a known blank included? Yes No

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1505P05

ANALYTICAL QC SUMMARY REPORT

BatchID: 208079

Sample ID: MB-208079	Client ID:	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801							
Sample Type: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235128							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1505P05

ANALYTICAL QC SUMMARY REPORT

BatchID: 208079

Sample ID: MB-208079	Client ID:	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801							
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235128							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	38.95	0	50.00		77.9	70.6	123				
Surr: Dibromofluoromethane	46.36	0	50.00		92.7	78.7	124				
Surr: Toluene-d8	42.08	0	50.00		84.2	81.3	120				

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1505P05

ANALYTICAL QC SUMMARY REPORT

BatchID: 208079

Sample ID: LCS-208079	Client ID:	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801							
SampleType: LCS	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235127							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	45.79	5.0	50.00		91.6	64.2	137				
Benzene	47.87	5.0	50.00		95.7	72.8	128				
Chlorobenzene	49.46	5.0	50.00		98.9	72.3	126				
Toluene	44.11	5.0	50.00		88.2	74.9	127				
Trichloroethene	48.20	5.0	50.00		96.4	70.5	134				
Surr: 4-Bromofluorobenzene	38.46	0	50.00		76.9	70.6	123				
Surr: Dibromofluoromethane	44.72	0	50.00		89.4	78.7	124				
Surr: Toluene-d8	41.65	0	50.00		83.3	81.3	120				

Sample ID: 1505P05-001AMS	Client ID: MW-11	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801							
SampleType: MS	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235132							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	62.87	5.0	50.00		126	60.5	156				
Benzene	46.25	5.0	50.00		92.5	70	135				
Chlorobenzene	49.89	5.0	50.00		99.8	70.5	132				
Toluene	56.37	5.0	50.00		113	70.5	137				
Trichloroethene	58.94	5.0	50.00		118	71.8	139				
Surr: 4-Bromofluorobenzene	40.19	0	50.00		80.4	70.6	123				
Surr: Dibromofluoromethane	46.59	0	50.00		93.2	78.7	124				
Surr: Toluene-d8	49.01	0	50.00		98.0	81.3	120				

Sample ID: 1505P05-001AMSD	Client ID: MW-11	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801							
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235133							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	58.92	5.0	50.00		118	60.5	156	62.87	6.49	20	
Benzene	50.61	5.0	50.00		101	70	135	46.25	9.00	20	

Qualifiers: > Greater than Result value < Less than Result value B Analyte detected in the associated method blank
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

Client: Environmental Management Associates, LLC
Project Name: Professional Cleaners
Workorder: 1505P05

ANALYTICAL QC SUMMARY REPORT

BatchID: 208079

Sample ID: 1505P05-001AMSD	Client ID: MW-11	Units: ug/L	Prep Date: 05/29/2015	Run No: 292801
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 208079	Analysis Date: 05/29/2015	Seq No: 6235133

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	49.90	5.0	50.00		99.8	70.5	132	49.89	0.020	20	
Toluene	49.70	5.0	50.00		99.4	70.5	137	56.37	12.6	20	
Trichloroethene	52.87	5.0	50.00		106	71.8	139	58.94	10.9	20	
Surr: 4-Bromofluorobenzene	40.18	0	50.00		80.4	70.6	123	40.19	0	0	
Surr: Dibromofluoromethane	49.37	0	50.00		98.7	78.7	124	46.59	0	0	
Surr: Toluene-d8	43.75	0	50.00		87.5	81.3	120	49.01	0	0	

Qualifiers:	> Greater than Result value	< Less than Result value	B Analyte detected in the associated method blank
	BRL Below reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside limits due to matrix
	Rpt Lim Reporting Limit	S Spike Recovery outside limits due to matrix	

APPENDIX C
UPDATED COST ESTIMATE